

Application No. 09/417,534

Amendments to and Listing of the Claims:

1. to 35. (Cancelled).

36. (Previously Presented) The interactive system according to claim 57, wherein the active substance is selected from the group consisting of a protein, a nucleic acid, a cellular signal substance, a partner of a biological or physiological affinity pair, a synthetic nickel-nitrilotriacetic acid (NiNTA) complex, a synthetically produced pharmacon, a synthetically produced active ingredient, and a marker for a biological or synthetic substance.

37. (Previously Presented) The interactive system according to claim 36, wherein the protein is selected from the group consisting of antigens, antibodies, tumor markers, surface antigens, ligands, receptors, surface-active cell fragments of bacteria, viral proteins and immune messenger substances.

38. (Previously Presented) The interactive system according to claim 36, wherein the marker is selected from the group consisting of a fluorescent or chemiluminescent substance, an expression sequence code (EST) and an enzyme.

39. to 41. (Cancelled).

42. (Previously Presented) The interactive system according to claim 57, wherein the surface is a membrane, a porous or solid microparticle, a magnetic microparticle, a filter mat, a fibrous material, a spun material or a combination thereof, or a coating made from a natural or synthetic substance.

43. (Previously Presented) The interactive system according to claim 57, wherein the system is comprised within a capillary tube system, a filter for physiological liquids, a dialyzer, a physiological replacement fluid, an enzyme delivery system, an arthroplasty or vascular prosthesis, or an artificial organ.

44. (Previously Presented) The interactive system according to claim 57, wherein the active substance is selected from the group consisting of an anticoagulant, a metabolically active enzyme, an antibiotic and a synthetic pharmacon.

45. (Previously Presented) The interactive system according to claim 44, wherein the anticoagulant is selected from the group consisting of heparin, hirudin, directly acting antithrombins and prothrombin.

Application No. 09/417,534

46. (Previously Presented) The interactive system according to claim 57, wherein the active substance further comprises an agent selected from an enzyme and a pharmaceutical composition.

47. (Previously Presented) A pharmaceutical composition comprising an interactive system according to claim 57.

48. (Cancelled).

49. (Cancelled).

50. (Cancelled).

51. (Previously Presented) The interactive system according to claim 57, adapted for treatment of disorders selected from the group consisting of metabolic diseases, coagulation defects, viral infections, bacterial infections, mycotic infections, parasitic infections and malignant diseases.

52. (Previously Presented) The interactive system according to claim 57, wherein the linker is a (poly)ethylene glycol.

53. (Previously Presented) The interactive system according to claim 57, wherein the active substance is coupled to the linker using a reactive derivative.

54. (Previously Presented) The interactive system according to claim 57, wherein the reactive derivative is selected from the group consisting of succinimidyl succinate, succinimidyl propionate, nitrophenyl carbonate, tresylate, epoxides, aldehydes, isocyanates, maleimides.

55. (Cancelled).

56. (Currently Amended) A foodstuff comprising an interactive system comprising:

(a) a surface of a plastic material selected from the group consisting of a poly(meth)acrylate polymer, a polyvinyl ester polymer, copolymers thereof, and a mixture of at least one polymethacrylate polyalkyl(meth)acrylate with one or more of the group consisting of polystyrene, polyacrylonitrile, polycarbonate, and polysulfone; the material containing at least one structural element (A) which is the ester group of the acrylate or vinyl ester polymer, and

(b) a linker coupled to a pharmaceutically or physiologically active substance, the linker selected from the group consisting of a (poly)alkylene glycol, a (poly)alkylene imine, a (poly)alkylene amine, a polyoxazolin and a (poly)alkylene sulfide,

Application No. 09/417,534

wherein the linker is attached to the structural element (A) on the surface of the plastic material by a hydrogen bond which cannot be reversed by pH values in the range of 2 to 13 or temperatures up to 60° C.

57. (Currently Amended) An interactive system comprising:

(a) a surface of a plastic material selected from the group consisting of a poly(meth)acrylate polymer, a polyvinyl ester polymer, copolymers thereof, and a mixture of at least one polymethacrylate polyalkyl(meth)acrylate with one or more of the group consisting of polystyrene, polyacrylonitrile, polycarbonate, and polysulfone; the material containing at least one structural element (A) which is the ester group of the acrylate or vinylester polymer, and

(b) a linker coupled to a pharmaceutically or physiologically active substance, the linker selected from the group consisting of a (poly)alkylene glycol, a (poly)alkylene imine, a (poly)alkylene amine, a polyoxazilin and a (poly)alkylene sulfide, wherein the linker is attached to the structural element (A) on the surface of the plastic material by a hydrogen bond which cannot be reversed by pH values in the range of 2 to 13 or temperatures up to 60° C.